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(54) A method of control of a mechanised artificial limb

(57) An arrangement of angular position transducers connected by bars is attached to the remaining leg, such that the angular position transducers can then provide to the computer the angles those joints are making with the bars. The computer can then build a "picture" of the current position of the remaining leg. The computer can then use this "picture" to decide what the position of the mechanised artificial leg should be, and issue the relevant commands to place the mechanised artificial leg in this position.

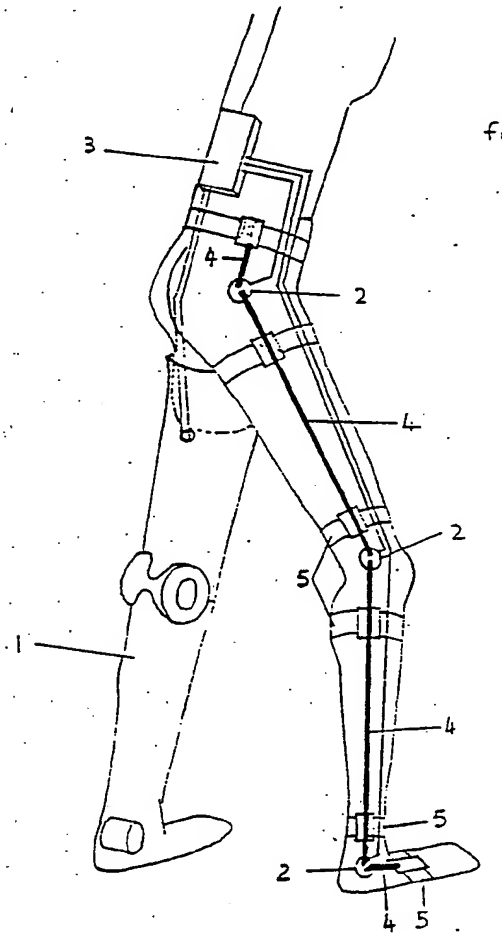

fig 1.

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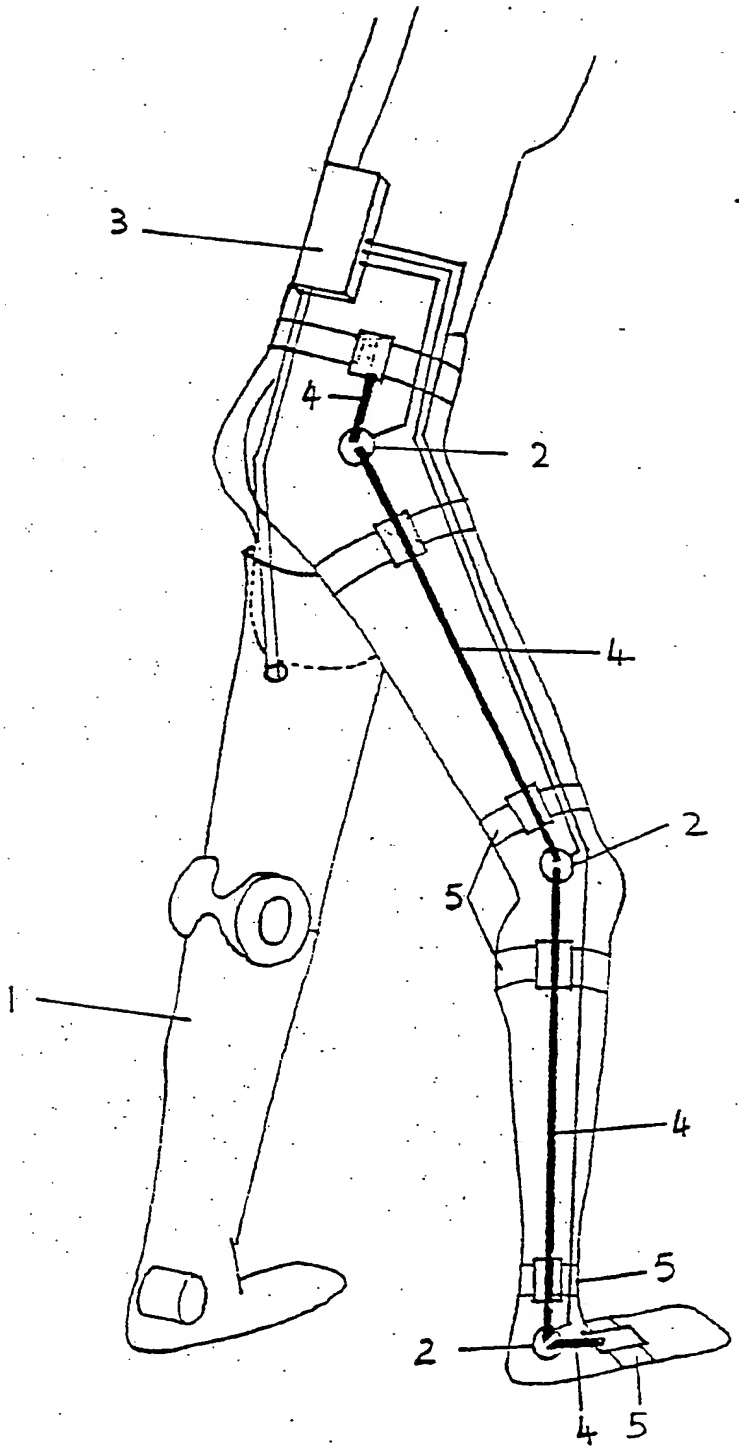

fig 1.

A METHOD OF CONTROL OF A MECHANISED ARTIFICIAL LEG

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This invention relates to the control of a mechanised artificial leg.

Artificial limbs are currently widely used as a result of the loss of a limb. Artificial legs are quite limited in the degree of manoeuvrability they give to the wearer. The development of powered artificial limbs seem to be currently hampered by the lack of a suitable method of control. The movement of the original leg that was lost and is now replaced by the artificial was independant, yet inherently linked to the movement of the other leg, this fact can be used to decide what movement the mechanised artificial leg should make based upon what movement the remaining leg is actually making.

The idea is to be used with a person who has lost a part of a leg from above the knee, however a smaller version could be made if the loss was from below the knee.

An arrangement of angular position transducers, connected by bars is attached to the remaining leg, such that the angular position transducers are at the moving joints. The angular position transducers can than provide to the computer the angles those joints are making with the bars. The computer can then build a "picture" of the current position of the remaining leg. The computer can then use this picture to decide what the position of the mechanised artificial leg should be, and issue the relevant commands to place the mechanised artificial leg in position.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawing in which:-
Figure 1 shows in perspective the angular position transducers, mechanised artificial leg, and computer in their respective positions.

Referring to the drawing, the leg control invention comprises a set of Angular position transducers 2 connected by the bars 4 and attached to the remaining leg by strap 5.

The angular position transducers signal their current position to the computer 3, the motorized artificial leg 1 is then moved to the desired position under control of the computer 3.

All the components are assembled as shown in figure 1. When the remaining leg is moved, the changes in position are passed to the computer. The computer then processes the information and decides what position it thinks the motorized artificial leg should be in. The relevent signals are then generated by the computer in order for the motorized artificial leg to attain the desired position.

CLAIMS

1. An arrangement of angular position transducers, connected by bars is attached to the remaining leg, such that the Angular position transducers are at moving joints. The angular position tranducers can then provide to the computer the angles those joints are making with the bars The computer can then build a "picture" of the current position of the remaining leg. The computer can then use this "picture" to decide what the position of the mechanised artificial leg should be and issue the relevant commands to place the mechanised artificial leg in this position.

2. The method of control of a mechanised artificial leg as described in detail herein with reference to figure 1 of the accompanying drawing.

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